

FARM AND FIRESIDE.



The Cabbage Butterfly and its Ravages.

My cabbage is infested with a green worm about 1 inch long, which I fear will destroy the entire crop if I cannot get rid of them. I have tried salt, kerosene dissolved in water and carbolic acid, with soap and water, and still none of these check them. Can your entomologist tell where they came from, and what will destroy them? and oblige,
W. A. Y.

The best answer we can make you on this subject is in the words of Miss Emily A. Smith delivered before the Wisconsin Horticultural society, at Green Bay last week, as follows:

Pieris rapae S.
Among other insects which have made their appearance to a serious extent, the cabbage butterfly is prominent. Much has been written on the habits and destruction of the insect in the Eastern States, and each year entomologists have apprehended their appearance in the West, but it was not until 1877 noticeably common, and in the centre of the State of Illinois, '78 first witnessed the power of its destructiveness. The life history of the insect, briefly stated is as follows: For many years it has proved a great impediment against growing members of the *Cruciferae* family in England and was confined exclusively to Europe until the year 1859, when Mr. Bowles captured specimens in the vicinity of Quebec, they having been conveyed while in the larva state on heads of cabbages, since which time they have spread with great rapidity, becoming acclimated at once, and being both wonderfully prolific and hardy has been considered one of the most destructive of insects. The eggs are placed indifferently on the under side of the leaf, sometimes appearing upon the leaf stalks, are very small and but slightly attached to the leaf, are not readily perceived, since they differ slightly in color from the leaf itself. These eggs hatch in about one week after they are laid, the young worms eating an opening through the shell of sufficient size to enable it to crawl therefrom. The first act of the young worm is to eat the shell of the egg from which it has been hatched. Dr. Fitch, the eminent entomologist of New York, states that this act requires five hours, when the worm remains at rest for a few hours.

The young insect finds itself at once upon its food plant, and weaves for itself a mat of carpet upon which it remains while partaking food. This mat is made from threads of excreting fineness, and comes from the glands on either side of the alimentary canal, from which it is in reality an appendage. These threads issue from the mouth and are fastened at short intervals to the leaf, until a thin film is formed sufficient in thickness to enable the insect to secure a firm grasp upon the leaf. If nothing occurs to drive the worm away, it remains in this position until the food is exhausted within its reach, when it moves to a fresh spot and again constructs a footing of silk. The caterpillar moults three times, is then one and a half inches long, pale green, finely dotted with black, a yellow stripe down the back and a row of yellow spots along each side in a line with the spiracles. When about to transform it leaves the plants on which it has been living and fastens itself on the under side of some stone, plank or fence-rail where it changes into the chrysalis or pupa state, from which the butterfly emerges later. In the summer the insect remains in the pupa state one week only, thus making its transformation from the desposition of the egg to the imago in four weeks, since the development of the embryo requires one week and the larval form is completed in a fortnight. This, however, only when all is favorable, since they have been known to remain from August 21 to December 8, or 109 days in the pupal form, and Joseph L. Adair succeeded in retaining one specimen from September 5 to May 28 or 255 days.

The butterflies are generally supposed to hibernate during the winter months, but in the instance cited above prove a variation. I am inclined to think the insect varies with the locality since those bred by myself, in Peoria during the years '77 and '78 remained without exception in the pupa state and many chrysalides were gathered from their covered retreats during the winter months, and on the approach of warm weather changed to the imago. The reason attributed to the hibernation of the butterfly was because the chrysalis was without a covering or protection. There are two broods each year. A prominent trait of the insect is the quiet peaceful disposition of the larvae. They avoid intrusion and do not encroach upon each other, or upon insects of other orders. They are capable of withstanding great hardships, are not affected by changeable weather, and neither degrees of temperature or privation of food for a time affect them. This remarkable tenacity to life renders artificial remedies less effectual, and hellebore, lime ashes and various proposed plans which prove so efficacious with the Testaceous larvae have no effect upon these. The French call it the *Ver de Cœur*, or heart worm, because they bore into the heart of the vegetable and do not confine themselves to the outer leaves. The butterflies have the bodies black above, with the wings white, and marked differently in the two sexes, the female being distinguished from the male by having two round spots (sometimes three) instead of only one on the front wings. The underside of the wings of both sexes are alike, there being two spots on the hind ones, which are yellowish, sometimes passing into green.

Most fortunately, nature has provided many natural enemies to the larvae of *Pieris rapae* whereby they are duly restrained. With their arrival in this country there came also parasites, the most common of which is the *Microgaster plagiator*. This minute fly punctures the skin of the cabbage worm in from thirty to sixty places, inserting an egg in each puncture, from which a

maggot hatches, which feeds internally upon the worm, weakening it to such an extent that it dies immediately after these maggots have gotten their growth and issued.

Another important parasite is the *Peronospora parvum*. This insect, when finding a newly-formed pupa, places upon its surface her whole stock of eggs, to the number of two or three hundred. The very small maggots which hatch from these eggs eat into the pupa, and then complete the transformation in two weeks, the small flies emerging, and commence searching at once for other pupae in which to deposit eggs for their next progeny.

Besides these two parasites, various species of small spiders subsist upon them, together with members of the *Coccinellidae*, or lady-bird family.

Remedies: It has been suggested that some advantage may be taken of the fact that the caterpillar leaves the cabbage for some sheltered place in which to undergo their transformations, by placing boards, that are raised a little from the ground, among the infested plants. By examining these boards every five or six days, and destroying the chrysalides, the future work may be very materially lessened, and where there are but few infested plants, the caterpillars may be destroyed by hand, but since they eat into the solid part of the cabbage, it would be better still to destroy the entire plant, by either flooding to stock or burning, as after the depredation by the insect, the market value of the vegetable is destroyed.

In addition to these devices, the butterflies that are seen flying over the cabbages may be caught, thereby preventing the deposition of eggs.

EMILY A. SMITH.

The Check-Rein.

Whipping and overworking do not torture like the check rein. When you compel a horse to contract the muscles just under the top of the collar, in order to sustain the head a foot, more or less, above its natural place, and then hold them thus contracted, the strain on those muscles soon produces great harm. If you do not believe it, watch the animal. Look at his eyes and ears. I am sure you cannot mis-understand that face. See him carry his head round on one side, and then away round on the other side. Now, in a moment, you will see him throw his nose up in front as high as he can, three or four times. That struggle for relief he continues all day long. When you take off the check he will hang down his head low, and show in his face a sense of relief which I am sure you cannot misunderstand. The long strain wastes the muscles, and produces that ugly hollow which is now so common just under the collar.

The "London Horse book" says: 'The check-rein is a useless and painful instrument, introduced by vanity, and retained by a thoughtlessness amounting to cruelty.'

Professor Pritchard, of the Royal Veterinary College, London, says: 'To sum up in a word, the check rein lessens the horse's strength, brings on disease, keeps him in pain, frets and injures his mouth and spoils his temper.'

The Holstein Cow.

A few weeks ago some correspondent inquired for a description of the Holstein cattle. We give below a fuller description than we could then present:

The Holsteins are attracting considerable attention, at present, among dairymen and farmers. This breed of cattle are natives of Holstein, Germany, but it is in Holland that they have attained their greatest perfection and they are highly valued for their good milking qualities, healthfulness and quiet dispositions. They are large animals, black and white in color with the white sometimes predominating, but generally black with large white clouds scattered over the body.

The Holsteins were first introduced to the notice of American farmers by Mr. Cheney, of Boston, about seventeen or eighteen years ago, and have attained some prominence in the Eastern States, among dairy farmers. Mr. George E. Brown, the manager of the Fox River Stock Association, was one of the first in the country, and certainly first in the West, to make a specialty of importing and breeding these cattle, and there is a large growing interest awakened in regard to them through the excellence of the stock he has raised out.

The Holsteins, from their large size and the ease with which they can be fattened when not milking, will be found useful and remunerative animals for the farmers, especially for those who are interested in dairying. The great point of excellence of the breed, however, is their unrivaled milking qualities, in which respect they are in advance of nearly every other breed.

WHAT SMOKING DOES FOR BOYS.—A certain doctor, struck with a large number of boys under fifteen years of age whom he observed smoking, was led to inquire into the effect the habit had upon general health. He took for his purpose thirty-eight boys aged from nine to fifteen, and carefully examined them. In twenty-seven of them he discovered injurious traces of the habit. In twenty-two there were various disorders of the circulation and digestion, palpitation of the heart, and a more or less marked taste for strong drink. In twelve there was frequent bleeding of the nose, teeth had disturbed sleep, twelve had slight ulceration of the mucous membrane of the mouth, which disappeared on ceasing from the use of tobacco for some days. The doctor treated all for weakness, but with little effect until the smoking was discontinued, when health and strength were soon restored. Now, this is 'old wife's tale,' as these facts are given on the authority of the *British Medical Journal*.

A young man applied to his employer for a short leave of absence, who having his own views of business suggested, that he might delay his vacation a few days. 'I would,' replied the young man, 'but the fact is I am going away to get married, the day is appointed, and I want to be there when it comes off.'

Road Making.

The plough should be put to use on the sides, to open old drains and make new ones. Shale rock generally yields to the plough in April, and its risk to allow hard clay to go over to May or June, as the plow may not be able to make the desired impression upon it. Where the rock is too hard, let powder be used. By making capacious side drains through rock, mud and covering rough places is secured. Surplus water is every where the trouble. Remove that and remedy is had. Side drains filled with standing water make soft roads, and there can be no improvement until the water is removed. To do this open the drains into the fields or cross streams, always make the outlets of drains large, so that the flow of water may not be checked at the very point where its escape should be freest. Planked culverts might be freest, but all ought to be longer—say 18 to 20 feet, to enable two vehicles to pass with entire safety. What is known as the "Virginia bridge," a heavy application of broken stone, depressed in the centre, answers best at most small water crossings. Winter springs on hill-sides should be treated to blind drain of stone three feet deep—the only permanent and satisfactory remedy for such terrain and temper-warming spots. Across marshy places 'bridging' with stone, well broken, on top at least, is the best thing to do, creek gravel added is a luxury that should never be rejected. Therefore, plowing the sides and opening drains, hauling gravel, &c., should begin at once. After corner planting the scoop will come in and do its work. As a useful and economical implement there is nothing to compare with the horse scoop. One will do the work of ten men with common shovels and do it more effectively. Every district should have plenty of scoops. There are too many breakers made. The exercise of proper judgment would discard one half of them, and improve the roads by so doing. On steep hill-sides breakers should leave the V shape. They divided the flow of water, and there is less wash; are likewise easier on the vehicle.

Hints.

If farmers' families would eat less pork and more eggs and chicken meat they would be healthier. Save your early pullets; they give the increase. It doesn't pay to keep a stock of old hens year after year. Keep charcoal where the fowls can get it whenever they want it. It is one of the best preventives of disease among fowls that I know of. About this time look out for hen hawks. Don't trust to any such device as traps on top of poles; a good marksman with a shotgun or rifle will do more towards exterminating hawks than all the traps in creation. Now that the mercury is well up towards the nineties, look out for the spider louse or red mite. They are nocturnal wretches, hiding on the under side of the roosts and in cracks through the day, and creeping out at night to suck the blood of both old and young fowls. Liberal doses of coal oil on the perches and in all cracks and crevices, and a thorough fumigation with sulphur is the remedy. The variation in weight of eggs per dozen is from three to five ounces. This shows that eggs should be bought and sold by weight.

Shoeing Horses.

The nails should be quite small and driven in more gently than is the custom. There is no reason why the smith should strike a blow at the little nail head as strong as he would deliver at the head of a spike or an oak boom. The hoof of the horse is not an oak stick, and the delicately pointed and slender headed nail is not a wrought iron spike, and yet you will see the nailer whack away at them as if it was a matter of life and death to get them entirely set in at two blows of his hammer. Insist that the nailer shall drive his nails slowly and steadily, instead of using violence. In this case, if his nail is badly pointed and gets out of proper line of direction, no great injury is done. It can be withdrawn and a new one substituted, without harm having been done the foot. But the swift, blind, and violent way prevents all such care, and exposes the horse to injury, if not permanent injury. Gentleness should be exercised in clinching the nails. Never allow a smith to touch a nail to the outer surface of the hoof. Nature has covered it with a thin filament of enamel, the object of which is to protect the inner membrane and fiber from exposure to water and atmosphere. The enamel is exactly what nature puts on your finger nail, reader. Under no circumstance should it ever be touched. If it is removed nature will be wickedly deprived of her needed covering, and cruelly left exposed to the elements.

The Siamese twins were on exhibition and among the spectators was an Irishman who had an original way of looking at things. He told a friend who was standing at his side that the most fortunate thing in the world was that they were brothers, because if they had been strangers to each other they would never have been able to get on together.

In plowing it is never a good plan to turn up a mass of crude earth of several inches in depth, never before exposed to the sun light and air. It will, unless heavy manuring is given as a top dressing, result in loss. In deepening a soil it is better to plow up an additional inch each year.

Have a sharp spade or thin chisel and cut under ground every plant of burdock poke weed or other biennial or perennial plant found growing in the fence corners, or other places likely to be infested, and you will soon find your yearly crop of weeds diminished.

While all good farms do not belong to good farmers good farmers usually own good farms. They make them so.

THE BEST DRINK FOR LABORERS.—

When you have heavy work to do, do not take either beer, cider or spirits. By far the best drink is thin oatmeal and water, with a little sugar. The proportions are a quarter of a pound of oatmeal to two or three quarts of water, according to the heat of the day and your work and thirst; it should be well boiled, and then an ounce or an ounce and a half of brown sugar added. If you find it thicker than you like, add three quarts of water. Before you drink it shake up the oatmeal well through the liquid. In summer drink this cold; in winter hot. You will find that it not only quenches thirst, but will give you more strength and endurance than any other drink. If you cannot boil it you can take a little oatmeal mixed with cold water and sugar, but this is not so good. Always boil it if you can. If any time you have to make a long day, as in harvest and cannot stop for meals, increase the oatmeal to half a pound, or even three quarters, and the water three quarts if you are likely to be very thirsty. If you cannot get oatmeal, wheat flour will do, but not so well. For quenching thirst, few things are better than weak coffee and a little sugar. One ounce of coffee and half an ounce of sugar boiled in two quarts of water and cooled, is a very thirst quenching drink. Cold tea has the same effect; but neither is so supporting as oatmeal. Thin cocoa is also very refreshing and supporting, but it is more expensive than oatmeal.

The lemon syrup bought at stores can be made at home much cheaper. Take a pound of Havana sugar, boil it in water down to a quart, drop in the white of an egg to clarify it, strain it, add one quarter of an ounce of tartaric or citric acid. If you do not find it sour enough after it has stood two or three days add more of the acid. A few drops of oil of lemon improves it.

As, assaulted by his tailor. 'I really cannot understand why you do not pay me my little bill. You had a good salary and it has been raised.' 'Yes.' 'And you promised me faithfully that you would pay me out of the amount you saved from my extra allowance.' 'I do I'll pay you.'

'When I was a boy,' said a very prosy, low-spirited orator to a friend. 'I used to talk in my sleep.' 'And now?' 'I said to my friend, "you sleep in your talk." But somehow that did not seem to be exactly the point the orator was going to make.'

A Western paper wants to know where the next world's fair will be held? We don't profess to know much about the next world, but in these digressing Sunday night is the favorite time for holding this world's fair.

'Is any one waiting on you?' said the polite clerk of one of our stores, to a lady apparently waiting to buy goods. 'What a question!' she answered. 'Why I've been married these ten years.'

That Tennessee preacher forgot himself, who, while addressing a ladies' charitable society said: 'My hearers, I now urge on all of ye to dive down into your breeches pockets and haul out suttin for the poor.'

An Irishman, at the imminent risk of his life, stopped a runaway horse a few days ago. The owner came after while, and quietly remarked: 'Thank you, sir.' 'An faith an' how are ye goin' to divide that betwene two of us?' replied Pat.

A man may be the representative of all that is good and upright, but even a coldly critical word will forgive him for quoting profane history when the hired girl is found with shaving shavings in his favorite razor.

A Mississippi man puts it thus: At the earnest solicitation of those to whom I owe money I have consented to become a candidate for County Auditor.

'Marriage,' says a cynic, 'is like putting your hand into a bag containing ninety-nine snakes and one eel. You may get the eel, but the chances are against you.'

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DRY GOODS, GROCERIES

Queensware,

Boots and Shoes

HATS, CAPS, &c.

All will be sold at very low prices. Boots and Shoes cheaper than ever. Call and examine them.

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Read the Certificate—One of Kings.

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Yours truly,

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BEWARE of no more when you can see it with a bottle of IRVING'S COUGH SYRUP. Price 25c.

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STATIONS	GO	631	605	633
Stanton	A. M.	A. M.	A. M.	P. M.
Hagerstown	7:45	12:15	5:00	
Mt. Jackson	7:55	12:25	5:10	
Woodstock	8:05	12:35	5:20	
Strasburg	8:15	12:45	5:30	
Winchester	8:25	12:55	5:40	
Summit Pt.	8:35	1:05	5:50	
Charlottesville	8:45	1:15	6:00	
Harp, Ferry	8:55	1:25	6:10	
Frederick	9:05	1:35	6:20	
Baltimore	9:15	1:45	6:30	

GOING WEST.

STATIONS	GO	638	640	636
Baltimore	A. M.	A. M.	A. M.	P. M.
Frederick	8:35			10:40
Hagerstown	8:45			10:50
Winchester	8:55			11:00
Strasburg	9:05			11:10
Woodstock	9:15			11:20
Mt. Jackson	9:25			11:30
Stanton	9:35			11:40

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Feb. 1—tf

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All work guaranteed to give satisfaction.

We put pumps in wells and cisterns of any depth and guarantee them to answer the purpose.

Furnish promptly to order. Give me a call.

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May 15th—1v.

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Apr. 30—tf

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Mustard, Nutmegs,

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My 18—tf.

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NORTH.

Stanton		11 15	2 15
Hagerstown	7 45	12 15	5 00
Mt. Jackson	7 55	1 25	5 10
Woodstock	8 05	1 35	5 20
Strasburg	7 10	12 27	3 05 8 18
Winchester	9 15	2 35	4 11 9 40
Summit Pt	10 11	3 49	4 48 10 31
Charlestown	10 43	4 48	5 10 11 01
Harp. Ferry	11 37	5 53	6 11 11 40
	P. M.	P. M.	
Hagerstown	2 55	8 55	
Martinsburg	1 02	10 17	
Fredrick	8 00	7 25	
Washington	5 03	8 00	
Baltimore	5 25	9 10	

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